Bioastronautics '05 Technology Forum

LEARN • COLLABORATE • EXPLORE

PROGRAM

This program contains the schedule, abstracts, and Web addresses (where available). Contact information for speakers and attendees will be distributed after the forum only to those who attend

	WEDNESDAY MARCH 16
0845	Welcome and Charge to Participants – Dr. Adrian Perachio
0900	***Bioastronautics Roadmap and the Space Flight Environment – Dr. John Charles*** *Abstract:* The Bioastronautics Roadmap captures the expert opinions—based on years of operational, clinical and academic experience, of professionals in all areas of bioastronautics—relating to the potential risks to humans for exploration-class missions. An initial attempt to quantify and rate those risks is made, and types of countermeasures are identified. The Roadmap is intended to provide necessary information to serve as the foundation for future timelines, schedules and specific roadmaps leading to the resolution of those risks and the safe execution of such missions. *Web site:* http://bioastroroadmap.nasa.gov *Interests:* Minimally obtrusive monitoring capability to acquire both clinically and scientifically-important physiological data during space flight; Physiological stressors to stimulate operationally-relevant responses to indicate state of adaptation and fitness for duty
1000	*Networking break*
1030	***Autonomous Medical Care – Dr. Kathy Johnson*** *Web site:* http://spacemed.jsc.nasa.gov ● *WG 1 Networking Team*: Dr. Clifford Houston (UTMB), Dr. Jeff Jones (JSC), and Dr. Jack Smith (JSC)
1100	***Tissue Engineering and Bioreactor Technologies – Dr. Neal Pellis*** *Web site:* http://slsd.jsc.nasa.gov/bso ● *WG2 Networking Team:* Dr. Diane Byerly (JSC), Dr. Joan Nichols (UTMB) and Dr. Dmitri Pappas (JSC)
1130	*Working lunch in Levin Dining Hall – box lunches provided*
1300	***Human Adaptation and Countermeasures Technologies – Dr. Antony Jeevarajan*** *Abstract:* Existing and potential technologies for human adaptation and countermeasures will be discussed. *Web site:* http://haco.jsc.nasa.gov *Interests:* Tissue analog studies for human health countermeasures; Early detection of diseases using genomics and proteomics; Miniature flow cytometer for long-duration missions to the Moon and Mars ● *WG3 Networking Team:* Dr. Arny Ferrando (UMTB), Dr. Dianne Hammond (JSC), and Dr. Zalman Vaksman (JSC)

Schedule (continued)

1330	***Microbial Surveillance During Long-Duration Spaceflight – Dr. Rebekah Bruce*** *Abstract:* Air, surface, and water monitoring for microbial content has been an on-going activity since the beginning of the occupation of the International Space Station. Bacterial and fungal enumeration and identification provide a means to evaluate and mitigate the risk to crew health and systems performance. *Web site:* http://hefo.jsc.nasa.gov *Interests:* Technologies that are not culture-based for the collection, detection, enumeration, and identification of microorganisms; Changes in microorganisms as a result of the effects of spaceflight (e.g., gene transfer, mutation rate, phenotypic characteristics) *WG4 Networking Team:* Dr. Mark Ott (JSC), Dr. David Watson (UTMB), and William Wong (JSC)
1400	*Networking break*
1430	***Exercise Countermeasures – Dr. Don Hagan*** *Web site:* http://haco.jsc.nasa.gov *WG5 Networking Team:* Dr. Ronita Cromwell (UTMB)
1500	Charge to Working Groups (WGs) and begin discussions
1600	*Rotate between WGs and continue discussions*
1700	WGs present recommendations
1730	Closing remarks

Check the forum Web page for new and updates, including streaming audio talks:

http://advtech.jsc.nasa.gov/btf05.asp